

Name: _____

Extra Credit Due Friday, April 23, 2010 at 1:45 p.m.

Directions: Show all work for full credit. Clearly indicate all answers.

Consider the following data collected from 3 Major League Baseball players:

Batting Average	Percentage of Strikeouts
0.328	3.2
0.290	7.6
0.340	4.0

Test if there is a linear relationship between the batting average, x , and the percentage of strikeouts, y , using the following steps:

1. Calculate the means for the batting averages and percentages of strikeouts.

2. Calculate the standard deviations for x and y .

3. Calculate the correlation between the batting average and the percentage of strikeouts.

4. Calculate the equation of the regression line between x and y .

5. Calculate the residuals from the 3 observations.

6. Calculate the regression standard error.

7. Calculate the standard error of b .

8. Calculate the test statistic.

9. Calculate the P-value for this test.

10. Is there sufficient statistical evidence to show that there is a linear relationship between batting averages and the percentage of strikeouts?